

Epi Monthly Report

Office of Epidemiology and Disease Control



Miami-Dade County
HEALTH DEPARTMENT

Outbreak of Ciguatera Toxin Poisoning due to the Consumption of Kingfish

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Background

On August 13, 2001 the Office of Epidemiology and Disease Control (OEDC) received a report that seven members of a workplace had been taken to an emergency room. The staff had eaten a dinner meal on August 12 at the workplace that included Kingfish. The fish was prepared and cooked at the workplace and had been frozen at the workplace since it was captured in the Bahamas a few months before to the meal. The OEDC started an investigation in cooperation with the emergency room and the Florida Poison Information Center (FPIC) in Miami.

Investigation

METHODS

Interviews of the patients were conducted by the FPIC, emergency room physicians and the OEDC. A Ciguafile, Record of Ciguatera Intoxication form, was completed for every patient to compare the symptoms in the group and for reporting purposes.

A left over sample of the cooked fish was sent to the Food and Drug Administration's (FDA) Gulf Coast Sea-

food Laboratory in Dauphin Island, Alabama for ciguatoxin testing.

RESULTS

The average age of seven clients was 36 years old and ranged from 27 to 51. Six were male, and one was female. All of the exposed had symptoms except for one patient who had induced vomiting 15 minutes after eating (see Figure 1). The main symptoms on six patients included vomiting (n=1), diarrhea (n=4), abdominal pain (n=4), joint and muscle pain (n=5), tingling and numbness in lips, tongue and nose (n=4), body aches (n=3), dizziness and vertigo (n=2), hot-cold reversal (n=1) and weakness in legs (n=3). The incubation period for all six patients was 3 hours. The six symptomatic patients were treated in the emergency room with intravenous 20% mannitol at 1 gram per kilogram, 500 mL per hour. One patient was admitted, two others were sent home but came back and were admitted to the hospital, and the other three were never admitted. The duration of



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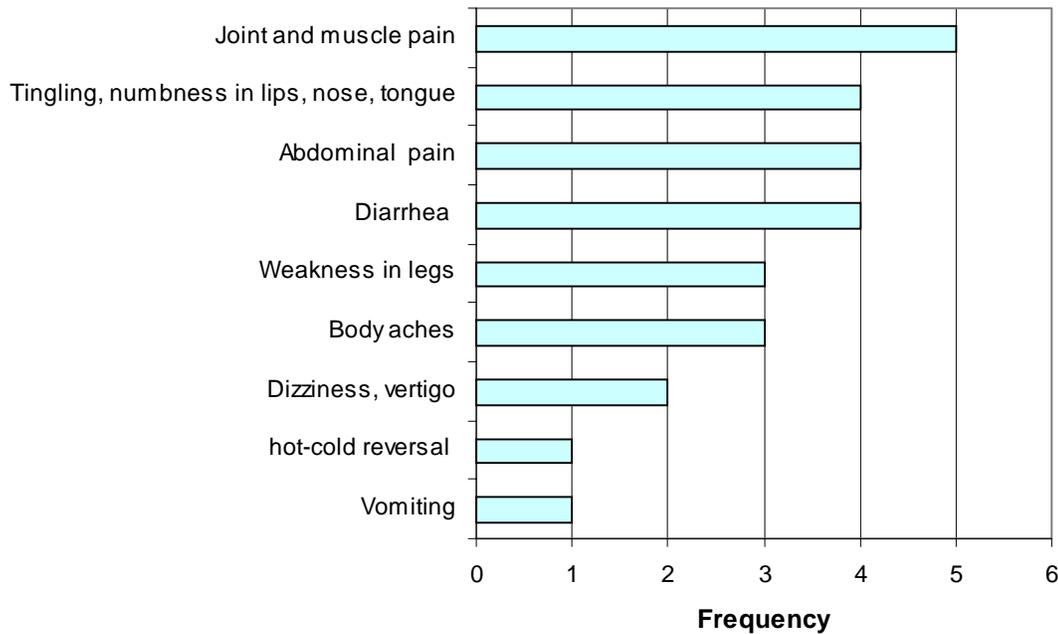
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Figure 1. Frequency of Symptoms of Ciguatera Toxin Poisoning among 6 patients.



symptoms varied, and some patients continued to have some weakness and other neurological symptoms as late as November when one patient was re-interviewed.

The FDA laboratory using a cytotoxicity assay reported that the fish sample had 5.8 parts per billion of Caribbean Ciguatoxin-1 (CCTX-1) equivalent, a level sufficient to cause symptoms.

Discussion

Ciguatera poisoning occurs throughout the Caribbean and tropical Pacific regions. Marine finfish most commonly implicated in ciguatera fish poisoning include the groupers, barracudas, snappers, jacks, mackerel, and triggerfish. Many other species of warm-water fish harbor ciguatera toxins. Ciguatoxins are odorless, colorless, tasteless, and unaffected by either cooking or freezing. Initial signs of poisoning occur within six hours after consumption of toxic fish. Ciguatera poisoning is usually self-limiting, and signs of poisoning often subside within several days from onset. However, in severe cases, the neurological symptoms are known to persist from weeks to months. In a few isolated cases neu-

rological symptoms have persisted for several years, and in other cases recovered patients have experienced recurrence of neurological symptoms months to years after recovery.

Persons should follow these general precautions to prevent ciguatera toxin poisoning: 1) avoid consuming large, predatory reef fish, especially barracuda; 2) avoid eating the head, viscera, or roe of any reef fish; and 3) avoid eating fish caught at sites with known ciguatera toxins.

References

1. CDC. *Ciguatera Fish Poisoning -- Texas, 1997* August 28. *MMWR*. 1998 / 47(33); 692-694.
2. U.S. Food & Drug Administration Center for Food Safety & Applied Nutrition. *Foodborne Pathogenic Microorganisms and Natural Toxins Handbook*.



No indication of anthrax in Miami-Dade County but please remain vigilant

Although we have had no cases of anthrax in the county or Florida since the two cases associated with the AMI Building in Palm Beach County and no anthrax has been identified from any tested environmental materials from Miami-Dade County, we still request that health care providers and infection control practitioners have a high index of suspicion for anthrax. Please report all suspect cases to us immediately (305) 324-2413 during working hours and (305) 377-6751. In addition, please forward any isolates of nonmotile Gram-positive bacilli to our state laboratory [Contact Dr. Segaran Pillai (305) 324-2432].



Welcome Dr. Fermin Leguen



Please join us in welcoming Fermin Leguen, MD, MPH as Assistant Director of the Office

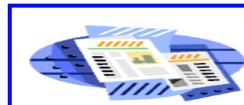
of Epidemiology and Disease Control. Dr. Leguen has over 20 years experience in disease control and public health in the United States and abroad, and is board eligible in Preventive Medicine and Public Health.



To report diseases or for information:

Office of Epidemiology and Disease Control

- Childhood lead poisoning prevention program (305) 324-2414
- Hepatitis (305) 324-2490
- Other diseases and outbreaks (305) 324-2413
- HIV/AIDS Program (305) 377-7400
- STD Program (305) 325-3242
- Tuberculosis Program (305) 324-2470
- Special Immunization Program (305) 376-1976
- Nights, weekends, and holidays (305) 377-6751



Monthly Report

Selected Reportable Diseases/Conditions in Miami-Dade County, October 2001

Diseases/Conditions	Reported Cases	2001	2000	1999	1998
	this Month	Year to Date	Year to Date	Year to Date	Year to Date
AIDS *Provisional	87	1098	1154	1200	1394
Campylobacteriosis	14	105	129	119	83
Chancroid	Not available	Not available	0	0	2
<i>Chlamydia trachomatis</i>	Not available	Not available	3041	3486	2643
Ciguatera Poisoning	0	0	2	0	0
Cryptosporidiosis	1	13	28	21	11
Cyclosporiasis	0	0	0	0	1
Diphtheria	0	0	0	0	0
<i>E. coli</i> , O157:H7	0	2	3	5	2
<i>E. coli</i> , Other	0	1	1	0	1
Encephalitis	0	0	0	0	0
Giardiasis, Acute	22	227	204	78	79
Gonorrhea	Not available	Not available	2419	2322	1951
Granuloma Inguinale	Not available	Not available	0	0	0
<i>Haemophilus influenzae</i> B (invasive)	0	1	2	1	1
Hepatitis A	23	157	75	79	112
Hepatitis B	9	55	47	19	62
HIV *Provisional	147	1348	1246	1351	1538
Lead Poisoning	40**	239**	355	Not available	Not available
Legionnaire's Disease	1	3	0	0	1
Leptospirosis	0	0	0	1	0
Lyme disease	0	6	7	0	1
Lymphogranuloma Venereum	Not available	Not available	0	0	0
Malaria	0	14	21	15	22
Measles	0	0	0	0	0
Meningitis (except aseptic)	2	18	21	28	15
Meningococcal Disease	1	14	24	18	10
Mumps	0	0	1	2	0
Pertussis	1	2	7	10	14
Polio	0	0	0	0	0
Rabies, Animal	0	0	0	0	1
Rubella	0	0	1	0	0
Salmonellosis	38	264	242	264	205
Shigellosis	12	127	196	164	207
<i>Streptococcus pneumoniae</i> , Drug Resistant	10	149	169	153	74
Syphilis, Infectious	Not available	Not available	111	63	22
Syphilis, Other	Not available	Not available	602	663	581
Tetanus	0	1	1	0	0
Toxoplasmosis	0	11	0	1	0
Tuberculosis *Provisional	19	186	215	217	245
Typhoid Fever	2	2	2	15	3
<i>Vibrio cholera</i>	0	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	0	1

* Data on AIDS are provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on Tuberculosis are provisional at the county level. ***: All follow-up cases were removed

